

# A B S T R A C T

A ferroelectric layer (104) is sandwiched between a lower electrode layer (103) and an upper electrode (105). When a predetermined voltage (DC or pulse) is applied between the lower electrode layer  
5 (103) and the upper electrode (105) to change the resistance value of the ferroelectric layer (104) to switch a stable high resistance mode and low resistance mode, a memory operation is obtained. A read can easily be done by reading a current value when a predetermined  
10 voltage is applied to the upper electrode (105).